



## CONTENTS

### PREFATORY CHAPTER

- Exploring Tropical Rice Diseases: A Reminiscence, *S. H. Ou* 1

### HISTORICAL PERSPECTIVES

- Pioneer Leaders in Plant Pathology: *E. C. Stakman, R. R. Nelson* 11  
Pioneer Leaders in Plant Pathology: Cynthia Westcott, Plant  
Doctor, *R. Kenneth Horst* 21  
Pioneer Leaders in Plant Pathology: James Johnson,  
*Robert W. Fulton* 27  
Landmarks in the Development of Phytobacteriology,  
*Mortimer P. Starr* 169

### PATHOGENS

- Infectivity Titration with Bacterial Plant Pathogens,  
*G. L. Ercolani* 35  
Nematode Chemotaxis and Possible Mechanisms of Host/Prey  
Recognition, *Bert M. Zuckerman and Hans-Börje Jansson* 95  
Wall-Less Prokaryotes of Plants, *J. M. Bové* 361  
Plant Viral Double-Stranded RNA, *J. A. Dodds, T. J. Morris,*  
*and R. L. Jordan* 151  
Acidic Precipitation Effects on Terrestrial Vegetation,  
*Lance S. Evans* 397  
Plant Diseases Caused by Flagellate Protozoa (*Phytomonas*),  
*M. Dollet* 115

### MORPHOLOGY AND ANATOMY

- Compartmentalization: A Conceptual Framework for  
Understanding How Trees Grow and Defend Themselves,  
*Alex L. Shigo* 189

### PHYSIOLOGY OF HOST-PLANT INTERACTION

- The Role of Recognition in Plant Disease, *J. M. Daly* 273  
The Relevance of Non-Host-Specific Toxins in the Expression of  
Virulence by Pathogens, *Robin E. Mitchell* 215

vi CONTENTS (continued)

|   |     |
|---|-----|
| Concepts and Methods Regarding Host Plant Resistance to Arthropods and Pathogens, <i>M. K. Harris and R. A. Frederiksen</i>         | 247 |
| GENETICS OF HOST-PATHOGEN INTERACTION   |     |
| Mutations, the Aberrant Ratio Phenomenon, and Virus Infection of Maize, <i>Myron K. Brakke</i>                                      | 77  |
| The Role and Importance of Pathogens in Natural Plant Communities, <i>A. Dinoor and N. Eshed</i>                                    | 443 |
| BREEDING FOR RESISTANCE   |     |
| A Critical Analysis of Durable Resistance, <i>R. Johnson</i>  | 309 |
| EPIDEMIOLOGY AND INFLUENCE OF THE ENVIRONMENT   |     |
| The Interaction between Environmental Stress Injury and Biotic Disease Physiology, <i>Peter G. Ayres</i>                            | 53  |
| Disease Incidence and Severity Relationships, <i>R. C. Seem</i>   | 133 |
| Plant Response to Air Pollutant Mixtures, <i>Richard A. Reinert</i>   | 421 |
| TOXICANTS AND CHEMICAL CONTROL  |     |
| Reactions of Mycorrhizal Fungi and Mycorrhiza Formation to Pesticides, <i>James M. Trappe, Randy Molina, and Michael Castellano</i> | 331 |
| INDEXES   |     |
| Subject Index   | 467 |
| Cumulative Index of Contributing Authors, Volumes 13-22   | 478 |
| Cumulative Index of Chapter Titles, Volumes 13-22   | 481 |

